Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An inkjet printing system comprising:

at least one ink printhead for depositing drops of a colored ink on a medium;

a fixer printhead for depositing drops of a fixer onto the deposited drops of the colored ink;

an overcoat printhead for depositing drops of an overcoat onto the deposited drops of the colored ink, wherein the fixer and overcoat printheads are half-height relative to the at least one ink printhead, and wherein each printhead includes a number of ink ejection elements and wherein the ink ejection elements of each printhead are logically divided into at least four contiguous groups that contain the same number of ink ejection elements;

wherein a third and a fourth group of ink printhead ink ejection elements are always unused; and

wherein a first and a second group of fixer and overcoat printheads are always unused;

and

a processor programmed to:

generate swath data for the at least one ink printhead, the fixer printhead, and the overcoat printhead;

generate null swath data for at least two groups of ink printhead ink ejection elements; and

generate null swath data for at least two groups of fixer and overcoat printhead ink ejection elements.

2. (Canceled).

3. (Currently Amended) The system of claim 1 [[2]], wherein the processor generates swath data for the fixer and overcoat printheads from the swath data for the ink.

4. (Original) The system of claim 3, wherein the processor also generates the swath data for each printhead.

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Currently Amended) The system of claim 1 [[7]], wherein at most a first and second group of color printhead ink ejection elements are active during printing; and wherein at most a third and fourth group of fixer and overcoat ink ejection elements are active during printing.

9. (Original) The system of claim 1, further comprising at least one additional fixer or overcoat printhead for bi-directional printing.

10. (Original) The system of claim 1, wherein the drops of the fixer and the drops of the overcoat combine on the medium to form a protective coating for the drops of the colored ink.

11. (Original) The system of claim 1, further comprising means for delaying the depositing of the drops of the fixer and the drops of the overcoat until the drops of the colored ink have at least partially dried.

12. (Original) The system of claim 1, wherein the at least one ink printhead includes a black printhead, a cyan printhead, a magenta printhead, and a yellow printhead.

13. (Original) The system of claim 1, wherein the at least one ink printhead includes a black printhead, a light cyan printhead, a light magenta printhead, a dark cyan printhead, a dark magenta printhead, and a yellow printhead.

14. (Original) The system of claim 1, further comprising a controller for operating the

printheads in a mode in which fixer and overcoat are not deposited.

15. (Currently Amended) An inkjet printing apparatus, comprising:

a carriage assembly moveable in a scanning direction for carrying at least one inkjet printhead, a fixer printhead, and an overcoat printhead, wherein each printhead includes a number of ink ejection elements and wherein the ink ejection elements of each printhead are divided into groups that are logically divided into at least four contiguous groups that each contain the same number of ink ejection elements; and

a processor programmed to:

generate swath data for the at least one ink printhead, the fixer printhead and the overcoat printhead, and wherein the fixer and overcoat printheads are half-height relative to the at least one inkjet printhead;

generate null swath data for at least two groups of ink printhead ink ejection elements; and

generate null swath data for at least two groups of fixer and overcoat printhead ink ejection elements.

16. (Original) The apparatus of claim 15, wherein the carriage assembly provides in-line arrangement of all printheads such that the colored ink, the fixer, and the overcoat are deposited in substantially the same rows of a print medium as the carriage assembly moves in the scanning direction.

17. (Original) The apparatus of claim 15, wherein the carriage assembly provides a staggered arrangement of the printheads such that the fixer and overcoat are deposited in substantially different rows of a print medium from the colored ink as the carriage assembly moves in the scanning direction.

18. (Original) The apparatus of claim 15, wherein the fixer printhead is located at one end of the in-line arrangement of inkjet printheads, and the overcoat printhead is located at the opposite end of the in-line arrangement.

19. (Canceled)

20. (Original) The apparatus of claim 15, wherein the overcoat and fixer printheads

are in a separate row from the ink printheads.

21. (Previously Presented) Apparatus comprising:

a processor programmed to generate swath data for a full-height ink printhead, a half height fixer printhead, a half-height overcoat printhead, and N contiguous groups of each printhead, where integer N>1, and wherein null swath data is always generated for at least one group of each printhead, such that the swath data causes the ink printhead to deposit drops of a colored ink, the fixer printhead deposits drops of a fixer onto the colored ink, and the overcoat printhead deposits drops of an overcoat onto the colored ink, and advancing the print medium by a distance half-height of the full-height ink printhead; and wherein N=4; wherein null swath data is always generated for the third and fourth groups of ink printhead ejection elements; and wherein null swath data is always generated for the first and second groups of fixer and overcoat printhead ink ejection elements.

22. (Original) The apparatus of claim 21, wherein the processor is a printer controller.

23. (Original) The apparatus of claim 21, wherein the processor generates swath data for the fixer and overcoat printheads from swath data for the ink printhead.

24. (Original) The apparatus of claim 21, wherein the processor also generates the swath data for the ink printhead.

25. (Original) The apparatus of claim 21, wherein the processor always generates null swath data for a group of ink ejections elements in each printhead.

26. (Canceled)

27. (Previously Presented) The apparatus of claim 25, wherein the groups contain the same number of ink ejection elements.

28. (Canceled)

29. (Previously Presented) A program for causing a processor to generate swath

data for printer including full-height ink, and half-height fixer and protective coating printheads, and swath data for N contiguous groups of each printhead, where integer N>1, and wherein null swath data is always generated for at least one group of each printhead, the half-height fixer and protective coating printheads containing fluids that, when in contact, form a protective coating, each half-height printhead having a plurality of separate ink ejection elements, the program instructing the processor to generate swath data only for a subset number of ink ejection elements in each half-height printhead so that ink is deposited and the fixer and protective coating printheads deposit the fluids on the ink; and

wherein N=4 and the 4 groups contain the same number of ink ejection elements; wherein null swath data is always generated for the third and fourth groups of ink printhead ink ejection elements; and wherein null swath data is always generated for the first and second groups of printhead ejection elements of the first and second protective coating printheads.

30. (Canceled)

31. (Canceled)

32. (Currently Amended) An article comprising:

a full-height ink printhead;

a half-height fixer printhead;

a half-height overcoat printhead;

wherein each printhead includes a number of ink ejection elements and wherein the ink ejection elements of each printhead are divided into groups <u>that are logically divided into at least four contiguous groups that each contain the same number of ink ejection elements</u>;

computer memory; and

instructions encoded in the memory to cause the processor to:

send swath data to the full-height ink, half-height fixer and half-height overcoat printheads;

generate null swath data for at least two groups of ink printhead ink ejection elements; and

generate null swath data for at least two groups of fixer and overcoat printhead ink ejection elements.

33. (Currently Amended) A method of using ink, fixer and overcoat printheads to print on a print medium, the method comprising:

sending swath data to the ink printheads, during a first pass, the swath data causing the ink printheads to deposit ink on the medium during the first pass; and

sending swath data to the fixer and overcoat printheads during a second pass, the swath data causing the ink printheads to deposit ink on the fixer and the overcoat during the second pass, wherein the fixer and overcoat printheads are half-height relative to the at least one ink printhead, and advancing the print medium by a distance half-height of the full-height ink printhead;

wherein each printhead includes a number of ink ejection elements and wherein the ink ejection elements of each printhead are logically divided into at least four contiguous groups that each contain the same number of ink ejection elements; and

wherein null swath data is generated for at least two groups of ink printhead ink ejection elements; and

wherein null swath data is generated for at least two groups of fixer and overcoat printhead ink ejection elements.

34. (Previously Presented) The method of claim 33, wherein active swath data is sent to only a subset of ink ejection elements in the ink printheads during the first pass, and only a subset of ink ejection elements in the fixer and overcoat printheads during the second pass.

35. (Canceled)

36. (Currently Amended) The method of claim [[35]] 33, wherein N=4 and the 4 groups contain the same number of ink ejection elements; wherein null swath data is always generated for the third and fourth groups of ink printhead ink ejection elements; and wherein null swath data is always generated for the first and second groups of fixer and overcoat printhead ink ejection elements.

37. (Currently Amended) A method of printing an image with an inkjet printer, comprising:

depositing drops of a colored ink onto a medium;

depositing drops of a fixer onto the deposited drops of the colored ink; and

depositing drops of an overcoat onto the deposited drops of the colored ink;

the drops of fixer and the drops of overcoat deposited from a fixer printhead and an overcoat printhead which are half-height relative to a printhead depositing the drops of colored ink onto the medium;

wherein each printhead includes a number of ink ejection elements and wherein the ink ejection elements of each printhead are divided into groups that are logically divided into at least four contiguous groups that each contain the same number of ink ejection elements; and

wherein null swath data is generated for at least two groups of ink printhead ink ejection elements; and

wherein null swath data is generated for at least two groups of fixer and overcoat printhead ink ejection elements.

38. (Original) The method of claim 37, further comprising:

determining a media type associated with the medium; and

performing the steps of depositing drops of the fixer and depositing drops of the overcoat only if the media type is plain paper.

39. (Original) The method of claim 37, wherein the drops of the fixer are deposited before the drops of overcoat are deposited.

40. (Original) The method of claim 37, wherein the drops of the overcoat are deposited onto the deposited drops of the fixer.

41. (Original) The method of claim 37, further comprising:

determining a media type associated with the medium; and

omitting the steps of depositing drops of the fixer and depositing drops of the overcoat only if the media type is specialty media.

42. (Currently Amended) A printing apparatus, comprising:

an ink printhead;

a fixer printhead;

an overcoat printhead; wherein each printhead includes a number of ink ejection elements and wherein the ink ejection elements of each printhead are divided into groups that are logically divided into at least four contiguous groups that each contain the same number of ink ejection elements; and

a program storage element for a processor, comprising:

computer memory; and

instructions encoded in the memory to cause the processor to control ink ejection elements to deposit drops of a colored ink from the ink printhead on a medium, and deposit drops of a fixer and an overcoat onto the deposited drops of the colored ink from the fixer printhead and the overcoat printhead;

wherein null swath data is generated for at least two groups of ink printhead ink ejection elements; and

wherein null swath data is generated for at least two groups of fixer and overcoat printhead ink ejection elements.